

PROCEEDINGS OF THE  
ROYAL ENTOMOLOGICAL SOCIETY  
OF LONDON

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GENERAL MEETING

WEDNESDAY, 4TH DECEMBER, 1946, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the General Meeting held on 20th November, 1946.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library.

*Presented.*

Van Heerdt, P. F. : *Eenige physiologische en Oecologische problemen bij Forficula auricularia*. 8vo. Utrecht (1946). [The author.]

In addition, separates have been presented by Prof. W. A. F. Balfour-Browne, F.R.S.E., Mr. D. G. Sevastopulo, Canon L. W. Grensted, Prof. F. Silvestri, the United States Department of Agriculture, Rothamsted Experimental Station, London School of Hygiene and Tropical Medicine, and the Imperial Institute of Entomology.

5. Admission of Fellows.
6. Nomination of Officers and Council for 1947.
7. Communications.

(1) **Dr. J. W. Evans.**

Leaf-hoppers (Homoptera, Jassoidea).

[Abstract.]

Most leaf-hoppers are dull-coloured, obscure insects which are seldom noticed, even by entomologists; their life-histories are considered prosaic and their classification difficult. For these reasons they are neglected by collectors and biologists alike and shunned by systematists.

They are, however, of considerable economic importance, and their study is by no means lacking in interest.

Their size, shape and coloration will be discussed, and particulars given of their environment, life-histories, association with ants, parasites and general habits. Mention will be made of their feeding-habits and mode of digestion. As well as the injuries to plants which they may cause by direct feeding, several jassids are known to be virus-transmitters and their economic importance in

both regards will be referred to. Particulars of their more interesting structural features will be given, their distribution considered and also their ancestry and relationships with other groups. An exhibit will be shown of the more striking forms and some reference made to the British representatives.

(2) **Mr. G. Talbot (on behalf of Mr. C. Cripps).**

Scent perception in some African myrmecophilous LYCAENIDAE.

(3) Communications and exhibits the titles of which have been received since the circulation of these agenda.

**Fellows are particularly requested to bring suitable exhibits to the General Meetings even though it may not be possible to announce their intention to do so before the meeting.**

If circumstances permit tea will be served in the Library before the meeting.

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**NOTICE.**

**A card index of Fellows' addresses arranged on a geographical basis** is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties; elsewhere under Dominions, Colonies, Foreign States, etc.

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PROCEEDINGS OF THE GENERAL MEETING HELD ON 20TH NOVEMBER, 1946.

Professor G. D. Hale CARPENTER, M.B.E., D.M., President, in the Chair.

Present, 56 Fellows and 5 Visitors.

The minutes of the meeting held on 6th November, 1946, were confirmed, and signed by the President.

The names of the following candidates for election were read :—

For the first time : G. C. Taylor, M.Sc., B.Agric., A.I.C.T.A., E. Dearing, B.Sc., and W. Urton.

For the second time : P. Vayssière, Rajindar Pal, M.Sc., Ph.D., S. el Din Aboulnasr, and J. H. Armitt.

Thanks were voted to donors of gifts to the Library since the last Meeting.

The Secretary read for the first time the following names of Officers and Council nominated for the ensuing year :—

*President* : C. B. Williams, M.A., D.Sc.

*Treasurer* : Arthur Welti.

*Secretary* : N. D. Riley, F.Z.S.

*Other Members of Council* :

C. H. Andrewes, F.R.S.

Capt. R. A. Jackson, R.N.

Professor G. D. Hale Carpenter,

Miss C. E. Longfield.

M.B.E., D.M.

Sir Guy A. K. Marshall, K.C.M.G.,

J. W. Evans, M.A., D.Sc.

D.Sc., F.R.S.

R. L. E. Ford.

A. M. Massee, D.Sc.

G. Fox-Wilson, N.D.H.

G. E. J. Nixon, B.A.

R. M. Greenslade.

J. F. Perkins, B.Sc.

A. G. Hamilton, B.Sc., B.Agr.,

J. A. Simes, O.B.E.

Ph.D., D.I.C.

Alternative nominations, supported by four properly qualified Fellows of the Society, must reach the Secretary before the meeting to be held on 4th December, 1946.

Communications were made by Dr. F. I. van Emden and Dr. T. H. C. Taylor (on behalf of Mr. F. D. Golding), abstracts of which appeared on pp. 35–36.

Dr. Taylor gave it as his opinion that the pollen collected on the underside of the hind-wings and body of the exhibited *Papilio demodocus* had no adaptational significance and was purely accidental. He drew attention to similar instances which had been communicated to the Society in the past. Mr. Simes mentioned that Sir Edward Poulton had recorded species of *Parnassius* covered with pollen. Dr. Corbet, remarking that *Papilio demodocus* was very closely related to the oriental *Papilio demoleus*, the distribution of the two species meeting in Arabia, found it of interest that *P. demoleus* in his experience never visited flowers.

In the discussion following Dr. van Emden's communication, Dr. Hinton said that there were some great differences between the first larval cuticle of the hemimetabola and the higher holometabola. In the higher holometabola, the first moult was complete, but in many, if not all, of the hemimetabola the

first larval moult appeared to be incomplete and neither the tracheae nor the tentorium of the head was moulted, judging partly from some first instar Mantid cuticles recently examined in which these structures could not be found. A second but less important difference was that the first instar cuticle of the hemimetabola was anchored to the egg by means of one or two filaments. In the BLATTIDAE and MANTIDAE these filaments were attached to the cerci, in the locusts to the hind tarsi, in many Hemiptera to the antennae and occasionally to the rostrum. In the MANTIDAE there appeared to be a positive correlation between the lengths of the filaments or anchoring cables and the distance between the egg and the outer surface of the ootheca. These filaments were the functional equivalents of the cremastral cables of the pupae of some Lepidoptera. In the MANTIDAE there were a great many minute backwardly directed spines on the cuticle which no doubt aided the larva to escape from the egg and work its way through the ootheca.

Dr. Hobby said he had studied egg-bursters in Psocids and found them similar in structure to those in Dragonflies. Dr. Wigglesworth remarked that although egg-bursters in the larvae of mosquitoes and fleas were alike in appearance, they were quite different in their mode of action. He was also interested to hear that Dr. van Emden had found egg-bursters in *Tenebrio* larvae, a thing he had failed to do. Professor Carpenter enquired whether, in cases where the egg-bursters functioned by pressure on the shell, there was a corresponding line of weakness in the shell. Dr. van Emden said that this was not necessarily so, and Dr. Hinton observed that in the STAPHYLINIDAE there was no cutting of the shell, but an immediate split on contact of the burster with the shell.

In addition Dr. V. B. Wigglesworth showed living specimens of the Milkweed Bug *Oncopeltus fasciatus* Dallas, a Lygaeid bug with a wide distribution in North and South America. Its principal host plant is the common milkweed *Asclepias syriaca* L. In the laboratory, if provided with water to drink, it can be maintained on the dried seeds of this plant. It multiplies rapidly with the minimum of attention at all seasons of the year if kept at 25° C.; it grows more slowly at room temperature. The milkweed bug is used extensively in America as a test insect for insecticides and should prove useful for many kinds of physiological work.

Professor Carpenter said that it was interesting that such a conspicuous warningly-coloured insect should feed on a species of Milkweed. He asked how moisture was obtained from dried seeds when the bug was bred in the laboratory. Dr. Wigglesworth replied that although the seeds appear dry they had an oily kernel, and he believed the insect injected digestive enzymes and reabsorbed the contents of the seed; certainly they completely emptied them. In reply to Dr. Richards, he stated that the seeds had to be imported from America.

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#### ADMISSION OF FELLOWS.

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-Laws and attends the meeting on 4th December, 1946, is requested to inform the Society before 5.15 p.m. on that date.

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The next Meeting (Annual Meeting) will be held on Wednesday, 15th January, 1947, at 5.30 p.m.